

ORNITHOLOGY A SCIENCE.

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A short time ago I had the question put to me by an Ornithologist—"What is the use?" "What is it all for?" and the statement was advanced that Ornithology is not a science but merely an amusement. This is not the only time this query has reached me. I have met it many times before in various forms, and perhaps a few thoughts that it has raised may be of value to others faced with the same problem.

Of course economic ornithology has a practical purpose, and affects our welfare directly. The food of birds has a direct influence upon our pockets, and is a practical study. Pure science, however, is in no sense practical. As soon as its discoveries become practically applied it ceases to be science in the strict use of the term. Franklin's experiment with the kite was scientific, in as much as he proved the identity of lightning, and electricity. The making and applying of lightning rods is not scientific but electro-mechanical, though founded upon scientific principals. Science then is the study of the laws of nature, not the practical application of them.

Man is an inquiring being. The lower animals also are inquisitive, but with this difference—they ask, "What is it?" "Is it good to eat or not?" "Harmful or friendly?" This answered they are satisfied. Man, on the other hand, no sooner settles these questions than he immediately asks, "Why or how is it?" And this is the riddle of the Sphinx, that all the world is trying to answer. What are we? Where did we come from and whither are we going? The Church-man points to the Scriptures for an answer, and that for ages sufficed. This gives a vague starting point and an equally vague objection, but with no details between; and it is these intermediate details that science is attempting to fill in. Nor can it be held to be disrespectful or antagonistic to religion or the Deity to suppose that in going from one point to another we must pass through intermediate space, and to speculate thereupon. This speculation is the domain of science and the

"Riddle of Existence"—the point on every side. The astronomer heaves his glass across the heavens. The microscopist cross-sections and slices, the chemist distils, and condenses; the geologist digs and maps, and the biologist classifies and notes. They are all working on the one problem in their various branches—"How and why is the Creation?" This is science and fundamentally there is but one science, though there are many branches that merge into each other in gradually fading lines. One of these lines is Biology, treating of life in general, which has a branch of Zoology which is again divided up into many others, birds or Ornithology forming one of them.

Pure science is speculation, but correct results cannot be arrived at without a close study of facts, and a collection of data. Speculation, to be scientific, must be founded upon fact or else chaos reigns and we are farther away from our goal than ever. Here we are collecting records, data, and noting habits and mapping out distributions. Should we go no farther than this we have an array of facts interesting in a way because of their peculiarities, but of no more value than a collection of postage stamps or tin tags. When, however, we compare these with each other, classify them and deduce laws from them, their true value shows itself.

The mass of such material requisite for even a superficial understanding of the laws and conditions governing bird life is, however, too enormous to be covered by any one man; neither are all men fitted for all the branches of this work. The great mass of data gathering must fall upon the lower rank and file, leaving the greater intellects free of the drudgery. And so we study Ornithology, that is we note and study birds in the field and closet—their habits, their structure and the conditions favorable or adverse, and every fact we gather and carefully file away where greater men can find them. It is interesting of itself and who knows what use may be made of the most insignificant fact thus gathered. Ornithology thus followed is a branch of the science; and the hope and aim of our work is that some day it may fill a little gap in our knowledge, and help us in an infinitesimal way to reconstruct the scenes of the past or formulate the prophecy of the future.